

Serial No. 09/020,716
Amendment Dated 01/25/2005
Reply to Office Action of 07/28/2004

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1-78. (Cancelled)

79. (Previously Presented) A transgenic cereal plant seed produced by the method of claim 113.

80-89. (Cancelled)

90. (Previously Presented) The expression cassette according to claim 112 wherein the promoter is a gamma zein promoter or a waxy promoter.

91. (Previously Presented) A vector comprising the expression cassette of claim 112.

92-104. (Cancelled)

105. (Previously Presented) The transgenic cereal plant seed of claim 114 wherein the seed endosperm-preferred promoter is heterologous to the polynucleotide.

106-111. (Cancelled)

Serial No. 09/020,716
Amendment Dated 01/25/2005
Reply to Office Action of 07/28/2004

112. (Currently Amended) An expression cassette comprising a seed endosperm-preferred promoter operably linked to a polynucleotide encoding a barley alpha-hordothionin protein modified to contain one or both ~~more~~ of about 7 mole % to about 40 mole % lysine or about 6 mole % to about 40 mole % of a sulfur-containing amino acid.

113. (Currently Amended) A method for increasing the level of one or both ~~more~~ of lysine or sulfur-containing amino acids in a cereal plant seed, the method comprising:

- a) transforming a cereal plant cell with an expression cassette, and
- b) regenerating a transgenic cereal plant to produce a transgenic cereal plant seed,

wherein the expression cassette comprises a seed endosperm-preferred promoter operably linked to a polynucleotide encoding a barley alpha-hordothionin protein modified to contain one or both ~~more~~ of about 7 mole % to about 40 mole % lysine or about 6 mole % to about 40 mole % of a sulfur-containing amino acid and wherein the level of lysine or sulfur-containing amino acid is increased in the transgenic cereal plant seed compared to a corresponding non-transgenic cereal plant seed.

114. (Currently Amended) A transgenic cereal plant seed comprising a modified barley alpha-hordothionin polynucleotide operably linked to a seed endosperm-preferred promoter, wherein the polynucleotide encodes a barley alpha-hordothionin protein modified to contain one or both ~~more~~ of about 7 mole % to about 40 mole % lysine or about 6 mole % to about 40 mole % of a sulfur-containing amino acid and wherein the transgenic cereal plant seed comprises an elevated level of lysine or sulfur-containing amino acid compared to a corresponding non-transgenic cereal plant seed.

Serial No. 09/020,716
Amendment Dated 01/25/2005
Reply to Office Action of 07/28/2004

115. (Currently Amended) A transgenic cereal plant comprising a modified barley alpha-hordothionin polynucleotide operably linked to a seed endosperm-preferred promoter, wherein the polynucleotide encodes a barley alpha-hordothionin protein modified to contain one or both ~~more~~ of about 7 mole % to about 40 mole % lysine and/or about 6 mole % to about 40 mole % of a sulfur-containing amino acid and wherein transgenic seed of the transgenic cereal plant comprise an elevated level of lysine or sulfur-containing amino acid compared to a corresponding non-transgenic cereal plant seed.
116. (Currently Amended) A transgenic cereal plant cell comprising a barley alpha-hordothionin polynucleotide operably linked to a seed endosperm-preferred promoter, wherein the polynucleotide encodes a barley alpha-hordothionin protein modified to contain one or both ~~more~~ of about 7 mole % to about 40 mole % lysine and/or about 6 mole % to about 40 mole % of a sulfur-containing amino acid and wherein transgenic seed resulting from the transgenic plant cell comprise one or both ~~more~~ of an elevated level of lysine or sulfur-containing amino acid compared to a corresponding non-transgenic cereal plant seed.
- 117-120. (Cancelled)